ASC
Avionics Simulation Core

General Description

Today's aircraft are equipped with numerous avionics systems that assist pilots in mission performance. The modern cockpit is an integrated environment which includes Head Up and Head Down Displays, audio cues, head and eye tracking systems, on-board diagnostics and troubleshooting systems. All systems are integrated and designed with a common architectural approach and single operational concept.
Our simulators conform accurately with actual avionics.
Elbit Systems' Avionics Simulation Core (ASC) provides the optimal solution for avionics implementation into the simulator. The ASC integrates the actual aircraft avionics by simulation of the mission computer interfaces or simulation of avionicswhen applicable.
The PC-based ASC provides an Ethernet interface to the flight simulator components.

Elbit SYSTEMS Ltd.

ASC

Avionics Simulation Core

Key Features

- Enables using actual aircraft avionics
- Simulation of real avionics computers
- Highly accurate simulation of sensors and weapons
- I/O facilities for actual avionics interfacing
- Implemented into F-4, F-5, MiG-21, F-16, ALX and
- other simulators
- Adaptable to any aircraft platform
- Use of simulated avionics where applicable

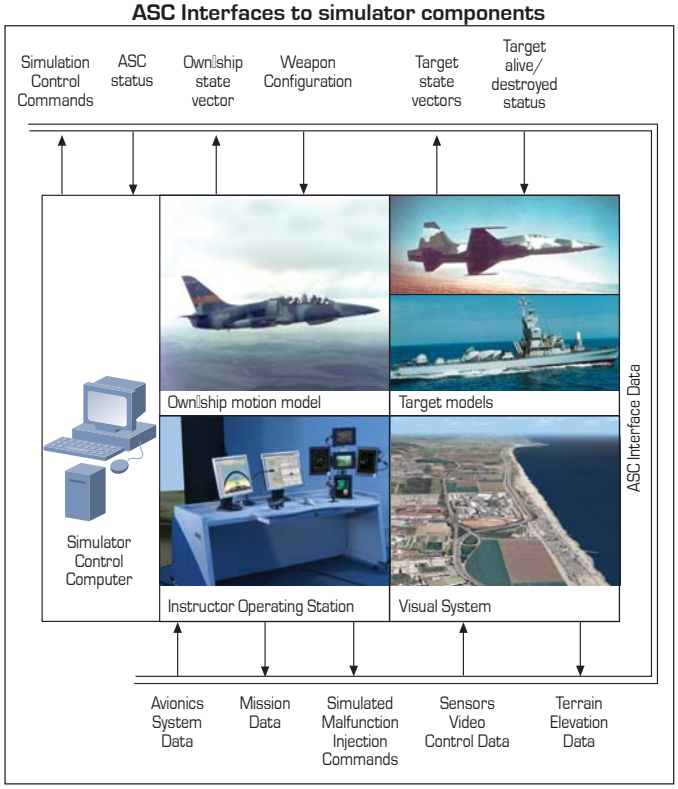
Technical Information

- Standard PC and VME chassis interfaces to actual avionics components
- Standard Ethernet interface to host computer
- Commercial I/O boards for standard avionics interfaces such as 1553, PP194, RS-232, RS-422 and ARINC family of protocols
- Software architecture providing an advanced shell for running real-time models
- Sophisticated debugging environment with data injection and data monitoring facilities
- Video format-conversion equipment
- Specific interface boards developed for specific I/O requirements

Major Advantages

- Stand-alone system easily integrated into simulator host computer
- Use of actual avionics increases simulation fidelity while enabling simple upgrade of aircraft Operation Flight Programs (OFP)
  - o Identical to real aircraft avionics functionality
  - o Simulator avionics slaves to actual aircraft avionics
- Field-proven in a large number of delivered systems
- Maximal use of Commercial-Off-The-Shelf (COTS) components

ASC Interfaces to simulator components



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Training & Simulation